



# BXUV.U463

## Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States  
Design Criteria and Allowable Variances

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada  
Design Criteria and Allowable Variances

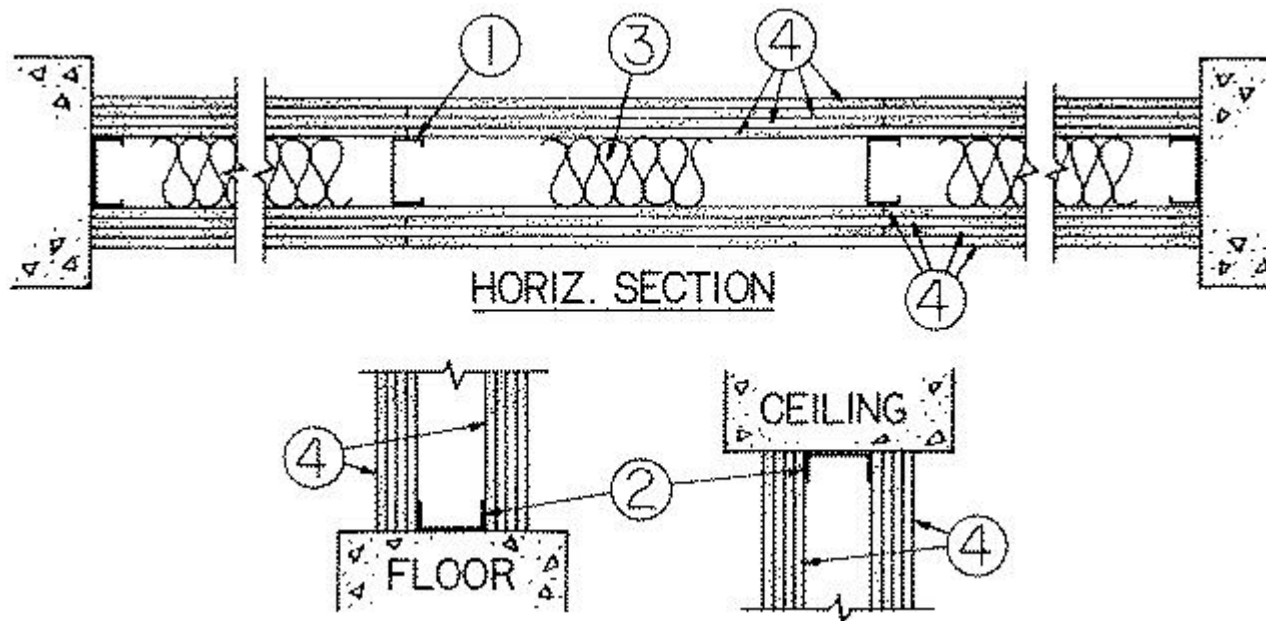
## Design No. U463

May 29, 2020

**Nonbearing Wall Rating — 3 or 4 HR**

**(See Item 4)**

**\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



**1. Studs** — Channel-shaped, min 1-5/8 in. wide by 1 1/4 in. deep, with 5/16 in. folded back return flange legs. Fabricated from No. 25 MSG galv steel. Stud spacing 16 or 24 in. OC. Studs to be cut 1 in. less than assembly height.

**1A. Framing Members\* — Steel Studs** — Not Shown — In lieu of Item 1 — For use with Item 2A, proprietary channel shaped steel studs, 1-1/4 in. deep by min 1-5/8 in. wide fabricated from min 0.018 in. thick galv steel, spaced max 24 in. OC. Studs cut 1 in. less in length than assembly height.

**CALIFORNIA EXPANDED METAL PRODUCTS CO** — Viper20™

**MARINO/WARE, DIV OF WARE INDUSTRIES INC** — Viper20™

**FUSION BUILDING PRODUCTS** — Viper20™

**IMPERIAL MANUFACTURING GROUP INC** — Viper20™

**1B. Framing Members\* — Steel Studs** — Not Shown — In lieu of Item 1 — For use with Item 2B, channel shaped steel studs, 1-1/4 in. deep by min 1-5/8 in. wide fabricated from min 0.018 in. thick galv steel, spaced max 24 in. OC. Studs cut 1 in. less in length than assembly height.

**CLARKDIETRICH BUILDING SYSTEMS** — CD ProSTUD

**DMFCWBS L L C** — ProSTUD

**MBA METAL FRAMING** — ProSTUD

**RAM SALES L L C** — Ram ProSTUD

**STEEL STRUCTURAL PRODUCTS L L C** — Tri-S ProSTUD

1C. **Framing Members\* — Steel Studs** — Not Shown — In lieu of Item 1 — For use with Item 2C, proprietary channel shaped steel studs, 1-1/4 in. deep by min 1-5/8 in. wide fabricated from min 0.018 in. thick galv steel, spaced max 24 in. OC. Studs cut 1 in. less in length than assembly height.

**TELLING INDUSTRIES L L C** — Viper20™

1D. **Framing Members\* — Steel Studs** — Not Shown — In lieu of Item 1 — For use with Item 2D, channel shaped steel studs, 1-1/4 in. deep by min 1-5/8 in. wide fabricated from min 0.018 in. thick galv steel, spaced max 24 in. OC. Studs cut 1 in. less in length than assembly height.

**TELLING INDUSTRIES L L C** — TRUE-STUD™

1E. **Framing Members\* — Steel Studs** — Not Shown — In lieu of Item 1 — For use with Item 2E — proprietary channel shaped steel studs, min 1.97 in. wide by 1-1/4 in. deep. Fabricated from No. 25 MSG galv steel. Stud spacing 16 or 24 in. OC. Studs to be cut 1 in. less than assembly height.

**KIRII (HONG KONG) LTD** — Type KIRII

1F. **Framing Members\* — Steel Studs** — As an alternate to Item 1 — For use with Item 2A (3-5/8 in. wide track), channel shaped studs, fabricated from min 25 MSG corrosion-protected steel, 1-1/4 in. wide by 3-5/8 in. deep, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.

**MARINO/WARE, DIV OF WARE INDUSTRIES INC** — StudRite™

1G. **Framing Members\* — Steel Studs** — — Not Shown — In lieu of Item 1 — For use with Item 2F, channel shaped steel studs, 1-1/4 in. deep by min 3-1/2 in. wide fabricated from min 0.018 in. thick galv steel, spaced max 24 in. OC. Studs cut 1 in. less in length than assembly height.

**RESCUE METAL FRAMING, L L C** — AlphaSTUD

2. **Floor and Ceiling Runners** — Channel-shaped runners, min 1-5/8 in. wide by 1-1/4 in. deep, fabricated from No. 25 MSG galv steel. Attached to floor and ceiling with fasteners spaced 24 in. OC. max.

2A. **Framing Members\* — Floor and Ceiling Runners** — Not Shown — In lieu of Item 2 — For use with Item 1A, proprietary channel shaped runners, 1-1/4 in. deep by min 1-5/8 in. wide fabricated from min 0.018 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

**CALIFORNIA EXPANDED METAL PRODUCTS CO** — Viper20™ Track

**MARINO/WARE, DIV OF WARE INDUSTRIES INC** — Viper20™ Track

**FUSION BUILDING PRODUCTS** — Viper20™ Track

**IMPERIAL MANUFACTURING GROUP INC** — Viper20™ Track

2B. **Framing Members\* — Floor and Ceiling Runners** — Not Shown — In lieu of Item 2 — For use with Item 1B, channel shaped runners, 1-1/4 in. deep by min 1-5/8 in. wide fabricated from min 0.018 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

**CLARKDIETRICH BUILDING SYSTEMS** — CD ProTRAK

**DMFCWBS L L C** — ProTRAK

**MBA METAL FRAMING** — ProTRAK

**RAM SALES L L C** — Ram ProTRAK

**STEEL STRUCTURAL PRODUCTS L L C** — Tri-S ProTRAK

2C. **Framing Members\* — Floor and Ceiling Runners** — Not Shown — In lieu of Item 2 — For use with Item 1C, proprietary channel shaped runners, 1-1/4 in. deep by min 1-5/8 in. wide fabricated from min 0.018 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

**TELLING INDUSTRIES L L C** — Viper20™ Track

2D. **Framing Members\* — Floor and Ceiling Runners** — Not Shown — In lieu of Item 2 — For use with Item 1D, channel shaped runners, 1-1/4 in. deep by min 1-5/8 in. wide fabricated from min 0.018 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

**TELLING INDUSTRIES L L C** — TRUE-TRACK™

2E. **Framing Members\* — Floor and Ceiling Runners** — Not Shown — In lieu of Item 2 — For use with Item 1E — proprietary channel shaped runners, 1-1/4 in. deep by min 1.97 in. wide fabricated from min 25 MSG thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

**KIRII (HONG KONG) LTD** — Type KIRII

2F. **Framing Members\* — Floor and Ceiling Runners** — Not Shown — In lieu of Item 2 — For use with Item 1G, channel shaped runners, 1-1/4 in. deep by min 3-1/2 in. wide fabricated from min 0.018 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

**RESCUE METAL FRAMING, L L C** — AlphaTRAK

3. **Batts and Blankets\*** — (Optional) — Nominal 1-1/2 in. thick, placed in interior of wall cavity.

See **Batts and Blankets** (BZJZ) category for names of manufacturers.

3A. **Fiber, Sprayed\*** — As an alternate to **Batts and Blankets** (Item 3) — (100% Borate Formulation) — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product with a nominal dry density of 2.7 lb/ft<sup>3</sup>. Alternate Application Method: The fiber is applied without water or adhesive at a nominal dry density of 3.5 lb/ft<sup>3</sup>, in accordance with the application instructions supplied with the product.

**U S GREENFIBER L L C** — INS735, INS745, INS750LD for use with wet or dry application. INS765LD and INS773LD are to be used for dry application only.

3B. **Fiber, Sprayed\*** — As an alternate to **Batts and Blankets** (Item 3) - Spray applied cellulose insulation material. The fiber is applied with water to interior surfaces in accordance with the application instructions supplied with the product. Applied to completely fill the enclosed cavity. Minimum dry density of 4.3 pounds per cubic ft.

**NU-WOOL CO INC** — Cellulose Insulation

3C. **Fiber, Sprayed\*** — As an alternate to Batts and Blankets (Item 3) — Spray applied cellulose fiber. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. The minimum dry density shall be 4.30 lbs/ft<sup>3</sup>.

**INTERNATIONAL CELLULOSE CORP** — Celbar-RL

3D. **Fiber, Sprayed\*** — As an alternate to Batts and Blankets (Item 3) — Spray-applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. To facilitate the installation of the material, any thin, woven or non-woven netting may be attached by any means possible to the outer face the studs. The material shall reach equilibrium moisture content before the installation of materials on either face of the studs. The minimum dry density shall be 5.79 lbs/ft<sup>3</sup>.

**APPLEGATE HOLDINGS L L C** — Applegate Advanced Stabilized Cellulose Insulation

4. **Gypsum Board\*** — 1/2 in. thick, 4 ft wide with square or tapered edges.

**For 4 Hr Rating** — Four layers of gypsum board to be used. Inner layers to be applied vertically with joints centered over studs. Outer layer may be applied vertically or horizontally. First layer fastened to each stud with 1 in. long Type S, self-tapping steel screws. Second layer fastened to each stud through the first layer with 1-5/8 in. long, Type S, self-tapping steel screws. Third layer fastened to each stud through the first and second layers with 2-1/4 in. long, Type S, self-tapping steel screws. Fourth layer fastened to each stud through the first, second and third layers with 2-5/8 in. long, Type S, self-tapping steel screws. First layer screws shall be located 5 in. from top and bottom of wall with a maximum spacing of 48 in. O.C. vertically between top and bottom screws. Second and third layer screws shall be located 4 and 3 in., respectively, from the top and bottom of wall with the same vertical spacing as the first layer screws. Fourth layer screws shall be located 2 in. from top and bottom of wall and spaced 12 in. O.C. vertically. Each fourth layer horizontal board end shall be centered over and secured to the stud with screws spaced 1/2 in. from end joint and 12 in. O.C. vertically. Board end joints shall be staggered. At board side joints all screws shall be located 1/2 in. from the joints. Fourth layer also secured to the second and third layers with 1-1/2 in. long, Type G, self-tapping steel screws located midway between studs and 1 in. from the horizontal joint. Joints in each layer of wallboard to be staggered from the joints in the adjacent layer and on opposite sides of studs.

**For 3 Hr Rating** — Three layers of gypsum board to be used. Inner layers to be applied vertically with joints centered over studs. Outer layer may be applied vertically or horizontally. First layer fastened to each stud with 1 in. long, Type S, self-tapping steel screws. Second layer fastened to each stud through the first layer with 1-5/8 in. long, Type S, self-tapping steel screws. Third layer fastened to each stud through the first and second layers with 2-1/4 in. long, Type S, self-tapping steel screws. First and second layer screws shall be locate 4 and 3 in. from top and bottom of wall, respectively, with a maximum spacing of 48 in. O.C. vertically. The third layer screws shall be located 2 in. from top and bottom of wall with a maximum spacing of 12 in. O.C. vertically. Each third layer horizontal board end shall be centered over and secured to the stud with Type S, self-tapping steel screws spaced 1/2 in. from end joint and 12 in. O.C. vertically. Third layer, also secured to the first and the second layers with 1-1/2 in. long, Type G, Self-tapping steel screws located midway between studs and 1 in. from the horizontal joint. Board end joints shall be staggered. Vertical board joints to be staggered from the joints in the adjacent layer and on opposite sides of studs.

**CERTAINTED GYPSUM INC** — Type C

**SAINT-GOBAIN GYPROC MIDDLE EAST FZE** — Type Gyproc FireStop, Gyproc FireStop MR, Gyproc FireStop M2TECH, Gyproc FireStop ACTIV'Air, Gyproc FireStop MR ACTIV'Air, Gyproc FireStop M2TECH ACTIV'Air

**THAI GYPSUM PRODUCTS PCL** — Type C.

4A. **Gypsum Board\*** — (Not Shown) — Composite Gypsum Panel — Nominal 5/8 in. thick, 4 ft wide panels. As an alternate to Item 4 when used only as the base layer on one or both sides of wall, applied vertically only and secured as described in Item 4.

**PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM** — Type QuietRock ES.

4B. **Wall and Partition Facings and Accessories\*** — (Not Shown) — Composite Gypsum Panel — Nominal 5/8 in. thick, 4 ft wide panels. As an alternate to Item 4 when used only as the base layer on one or both sides of wall, applied vertically only and secured as described in Item 4.

**PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM** — Type QuietRock 527.

5. **Joint Tape and Compound — (Not Shown)** — Vinyl or casein, dry or premixed joint compound applied in two coats to joints and screw heads. Paper tape, 2 in. wide, embedded in first layer of compound over all joints.

6. **Barrier Mesh** — (Optional, Not Shown) - Attached to steel studs on one or both sides of the wall using Barrier Mesh Clips spaced at maximum 12 inches on center vertically, using a flat head type screw penetrating through the steel at least 3/8 of an inch. For Steel Studs less than 0.033 inches in thickness, use self-piercing screws. For Steel Studs equal to or greater than 0.033 inches in thickness, use steel drill screws (self-tapping). Gypsum Board (Item 4) to be installed directly over the Barrier Mesh using prescribed screw patterns with lengths increased by a minimum 1/8 in. Barrier Mesh may be installed with the long dimension of the diamond pattern positioned vertically or horizontally. Barrier Mesh joints may occur as butt joints at the framing members and secured using the Barrier Mesh Clips or occur in between framing members as overlapping joints secured using 18 SWG wire ties spaced a maximum 12 in. on center.

**CLARKDIETRICH BUILDING SYSTEMS** — Barrier Mesh, Barrier Mesh Clips

**\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

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